

As previously acknowledged, Gough relates to the same subject matter as the present invention, i.e., the stabilization of a halogen containing resin and discloses that it is known in the art to use organic thiols, hindered phenols, tin carboxylates, organotin carboxylates, and organotin mercaptides as stabilizers for such resins. The reference further indicates that it was previously known that the combination of an organic thioanhydride and a mono-hydroxycarbonyl tin compound could be used. The Gough patent teaches a synergistic stabilizer composition which contains an organotin borate and an organic thiol.

The claimed invention, in contrast to the reference, relates to the combination of known conventional stabilizing agents with a carboxylic acid ester containing a mercaptan function in the alcohol residue thereof. The applicants' invention does not relate to the combination of a thiol with a borate which is the essence of the Gough patent.

The Examiner has taken the position that applicants' recitation of a metal containing stabilizer is insufficient to distinguish from the reference's organotin borates since the former class is generic to the reference's materials. It is not understood how such reasoning is applicable to Claims 17 and 26-28. Claim 26, and thereby Claims 27-28, recites specifically the conventional stabilizers by means of a Markush group and no organotin borate is recited. Claim 17 recited that the metal of the stabilizer was selected from the group consisting of tin, antimony, zinc, magnesium, the alkali metals and the alkaline earth metals. The alkali metals and alkaline earth metals are groups IA and IIA of the periodic table while the metal boron lies in group IIIA. Accordingly, the boron containing stabilizer of Gough is outside the scope of Claim 17. Since Claim 17 has now been incorporated into Claim 14, none of applicants' claims can be interpreted so as to encompass the organotin borate of Gough.

It is respectfully submitted that the rejection of all of the claims over Gough on the basis of Section 103 is untenable. As pointed out above, Gough relates to a synergistic composition which contains an organic thiol and an organotin borate. Applicants recognize that the reference teaches esters falling within applicants' formula in its broader aspects under certain limited circumstances where j is 0 and h is 1 in formula g. However, Gough offers the artisan a choice of four general formulas in which some of the moieties are not defined without any greater specificity than "aliphatic" or "aromatic". The huge number of thiols disclosed by the reference would not lead those skilled in the art to applicants' compounds or suggest to those skilled in the art that applicants' compounds could be used with conventional stabilizers to improve the activity thereof. It should also be kept in mind that Gough teaches a synergistic combination of an organotin borate and an organic thiol. The reference does not suggest that any of the organic thiols described therein would provide advantages when used in conjunction with a material other than an organotin borate and, indeed, the reference does not even teach or suggest that those particular thiols which may fall within the present applicants' broadest claims would contribute any stabilizing properties to a composition in the absence of the borate.

The applicants' sulphur containing materials are not used in conjunction with a stabilizer containing the metal boron. Beyond this fact, applicants' esters can be added to non-tin stabilizers such as those of antimony, zinc and calcium and obtain very significant stabilization. This is illustrated in Examples 12-21 on pages 16-18. This feature of the invention is unexpected. A further surprising and unexpected result lies in the improvement of the viscosity during working due to the addition of the mercaptoalkyl esters as demonstrated in the working examples.

In view of all of the foregoing, it is clear that the claims as amended above are not anticipated by or rendered obvious by the Gough patent. Accordingly, it is believed that this application is now in condition to be allowed and the early issuance of a Notice of Allowance is respectfully solicited.

Respectfully submitted,

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